

SECTION 4: EDUCATIONAL PROGRAM

A. PROGRAM EVOLUTION

The primary goals of the Wellesley High School have been to develop, educate and graduate students who gain knowledge, skills, curiosity and desire to participate as active citizens in a global society. With over 90% of students going onto higher education, a secondary goal has been to prepare students to meet the requirements of an ever-increasingly competitive college admissions process.

The High School **Educational Program** is the base onto which the following elements are built:

- quality instruction
- strong leadership
- collaborative and respectful learning communities
- adequate resources and
- conducive and safe learning spaces

The current Educational Program can be traced back to when the Wellesley Public Schools first opened its doors: The core academic subjects continue to be math, language arts, history, social studies, science and language. Further, there has been continued recognition of the importance of the arts, fitness and academic applications such as business and technical education. Yet today's program is significantly different from the original.

Impact of legal mandates on program and instruction

1. *No Child Left Behind* Act of 2001.

The most dramatic changes in education can be attributed to legal mandates. The most recent is the shift to a mandated standards-based model where schools are accountable to insure every child achieves proficiency performance levels as defined by state benchmarks. This is embodied in the Massachusetts Education Reform Act of 1993 as manifested in the MCAS high-stakes testing; and again in the federal legislation, *No Child Left Behind* Act of 2001.

Because standards-based education focuses on outcomes for every student, it requires individualized assessment for more effective differentiated instruction and is therefore more teacher-intensive.

Differentiated instruction to accommodate a variety of learning styles is enhanced by being able to shift within the classroom among a variety of instructional practices and strategies: teacher or student-directed, flexible grouping, or project based work. Flexibility to do this is impeded in a classroom too small or designed inappropriately.

2. *Individuals with Disabilities* Act of 1975

A second major legal impact has been the *Individuals with Disabilities* Act of 1975 that requires free and appropriate public education for all students regardless of disability. For most of our special needs students, the appropriate education is inclusion in the regular classroom. The needs of this population underscore the importance for differentiated instruction as well as smaller class size. For some of our students, different classrooms and an even lower student-to-teacher ratio is required.

3. *Title IX, 1972*

Title IX provides gender equity with respect to opportunities and facilities for athletics and fitness programs. Successful programs offer boys and girls a variety of options to participate on a team, promote personal development, share in school spirit and develop community pride. With the increase in opportunities, participation has grown significantly.

Ongoing Assessment and Improvements to Program

1. *Continual improvement*

Continual assessment and improvement have made Wellesley High School a strong and vibrant learning community. Each core academic subject undergoes an in-depth review every 10 years. The review involves an assessment of Wellesley internal practices against current best practices and results in modifications to the curriculum.

2. *Technology advances*

In addition to ongoing reviews of the curriculum, advances in applications of technology to facilitate learning have transformed instruction like no other tool before it. It has increased the opportunity for differentiated instruction, accessing or conveying information, achieving greater understanding of material, applications, and connections inside and outside of the classroom. As technology continues to evolve, it continually challenges educators to find ways to fully reap its potential.

Use of technology is reviewed on an annual basis. Based on existing technology inventory, new technology availability and curriculum needs, curriculum technology goals and a plan for achieving them are established.

B. CURRENT CORE ACADEMICS

The Wellesley High School Program of studies is a comprehensive program that includes the study of core academic subjects such as English, math, science and technology, social studies, and languages.

1. *English*

Dedication to the study of literature and to skillful use of language shapes the goals for English. Students are instructed in the use of language to accumulate and organize data; formulate and communicate ideas; recognize themselves in historical, cultural, and imaginary contexts; and recognize that language shapes and is shaped by one's viewpoint. Reading, critical thinking, speaking, listening, responding, and writing skills are reinforced in every course. Students are required to take four years of English. In addition to the core English courses at each grade level, an array of electives are offered including; Shakespeare, writing nonfiction, beginning journalism, speech/debate, film, African-American studies, the Bible and Mythology and others.

2. *Mathematics*

While students are encouraged to take four years of mathematics, each student must pass two years of mathematics for graduation. Courses offered range from Cognitive Tutor geometry to Advanced Placement calculus or statistics. Some students choose to enroll in the Interactive Mathematics Program in which students study mathematics in the context of meaningful themes and complex problems. The IMP curriculum challenges students of all skill levels to actively explore open-ended situations, in a way that closely resembles the inquiry method used by mathematicians and scientists in their work.

3. *Science and Technology*

Courses in four major scientific disciplines (earth science, chemistry, biology, and physics) are offered. Students begin with a ninth grade earth science course, followed by chemistry and then biology and physics. AP courses are offered in chemistry, biology, and physics.

4. *Social Studies*

The social studies program follows a logical progression in terms of courses offered at each grade level. Students in grades 9 and 10 are exposed to courses that provide background in the broad scope of world history from classical to modern times. In grade 11 there is an assumption that students will have acquired some background on issues that have influenced our own national development and policy in previous courses. This allows teachers in the U.S. history program to deal with some significant areas in depth as well as provide a comprehensive view of the span of U.S. history. Russia, Philosophy, and East Asian History are courses open to juniors. Grade 12 electives include: political science, economics, sociology, psychology, philosophy, You and the Law, and Contemporary Global Issues. AP Psychology and Humanities are also offered.

In order to meet the needs of a wide range of student, Wellesley High School offers a variety of courses taught at three different levels; H (Honors), ACP (Advanced College Preparatory) and CP (College Preparatory).

5. *Languages, Classical and Modern*

The Department of Classical and Modern Languages offers courses of study in French, Spanish, German, and Latin. Beginning in fall 2008, Chinese will be offered. Language courses stress a balanced approach in which the skills of listening, speaking, reading, and writing are developed. Students are expected to develop the skills of understanding modern world languages spoken at normal speed and of speaking these languages, within the confines of vocabulary and structures studied. Advanced Placement courses are offered in each of the core languages.

C. **ELECTIVES**

The Educational Program of today is more than just the core academics, but encompasses elective courses. Students study a breadth of courses in the visual arts, communications, family and consumer science, and technology and engineering.

1. *Visual Arts*

The Department of Visual Arts focus is on learning art principles and their application in all mediums. It does so by offering courses in both traditional mediums such as drawing, painting and ceramics, and in more current mediums such as web design, animation, photography, digital art and jewelry. The art program goal is to foster a degree of visual literacy for the entire school community.

2. *Communications*

The Department of Communications offers courses of study in TV and Video production.

3. *Family and Consumer Sciences*

The Department of Family and Consumer Sciences merges the Home Economics and Business Administration programs into one with its primary objective to provide students with the essential knowledge and skills to manage the challenges of living in a diverse, global society. It offers courses of study in child development, culinary arts and business.

4. *Technology and Engineering*

The Technology and Engineering program is designed to prepare students for the future in an increasingly technological world and for collegiate engineering and advanced vocational/technology programs. Courses offered include technical design, robotics, wood manufacturing and auto technology.

D. ELECTIVES WITH EXTRACURRICULARS

The electives program also includes performing arts and fitness and health. These programs provide during the day curriculum experiences for students, and they are a significant part of the extracurricular program. The performing arts, fitness and health, and athletics programs have evolved substantially since the origin of the Wellesley Public Schools.

The most significant part of this evolution is the role extracurricular activities now play in the experience of our students. For the vast majority of students, these endeavors are critical to their social and emotional development and will help define who they are. College applications place a great deal of importance on what students choose to do beyond the classroom in addition to their academic performance. See below for further detail on the Performing Arts and Athletics programs.

1. *Performing Arts*

Performing Arts at the High School consist of Dance, Drama and Music. Courses offered are: Auditioned Jazz Bands (2 levels), Auditioned Wind Ensemble, Concert Band, Music Technology, String Orchestra, Auditioned Jazz Choir (Rice Street), Auditioned Chamber Chorus (Keynotes), Concert Choir, Men's Chorus (Brooks Brothers) and Women's Chorus (Song Sisters). There is also a theory/history course called Complete Musician. Various groups compete in district, regional and state competitions and festivals.

Drama courses offered are: Drama I, II, III and IV as well as Playwriting, Play Reading and Stagecraft.

Beyond the school day opportunities in Performing Arts include: a Dance Troupe (Moving Company); two plays (one of which is competitive); a musical; vocal a cappella groups; orchestra; small instrumental ensembles; and fiddle groups. Every three years, students have the chance to perform in a larger ensemble (200 students) when a Masterwork is performed.

Over 400 students participate in Performing Arts Classes, and per class enrollment ranges from 15 to over 50 students. In addition, hundreds of students participate in extensive after-school activities, including the fall musical, two plays, the drama society and several ensemble groups.

Performing Arts spaces currently include the auditorium, backstage, a choral room, a band/orchestra room and practice rooms. All are utilized to full capacity during school hours and highly utilized after school hours. Participation in Performing Arts is an important experience for students, and the participant numbers already exceed the capabilities of the current facility.

When built in 1938, the auditorium accommodated the entire student body. The new *Massachusetts School Building Authority* (MSBA) standard suggests an auditorium seat half the anticipated student body, or 800 students at the projected peak enrollment for WHS. The existing auditorium has 645 seats. It has inadequate lighting, acoustics and back-stage spaces. Significant and costly renovations would be required to bring the auditorium up to compliance with *American*

with *Disabilities Act* (ADA) and to increase the seating to the 800-seat would be costly and would still yield inadequate production capabilities.

2. *Fitness and Health and Athletics*

To meet the Massachusetts Physical Education requirements, Wellesley students are required to take 5 semesters of courses during their 4 years of high school, including a mandatory workout course and sophomore health course. With the current enrollment of 1200 students, during any one semester, approximately 800 students are participating in a Fitness and Health class.

The goal of the Fitness and Health program at Wellesley High School is to offer a variety of options to engage students and enhance the establishment of life long habits of fitness. The program offers a range of activities that are developmentally appropriate and geared toward the acquisition of knowledge and skills to be physically active for a lifetime. To engage students in fitness programs, the programs try to remain dynamic and responsive.

Students can select from among four tracks: Adventure Fitness (indoor climbing walls and the outdoor ropes challenge course), Fitness Center Workout (a progressive Workout and Personal Training course), Traditional Activities (Sport Education, Racket, Bats and Clubs); and, Alternative Activities (Yoga, Power Up , Dance and Core Training).

A total of 64 (31 varsity, 22 junior varsity, and 11 freshman) team activities take place over three seasons of a school year. Of these, there are 31 girls teams, 29 boys teams, plus four that are coed. Over 700 individual athletes will participate on 1269 team spots. Over 80% of last year's graduating class participated in an athletic team at some point in their four-year high school career.

Wellesley High School presently has two gymnasiums, the original 1938 gym and the 1963 Larsson gym. Both gyms are in need of renovation. The lighting is poor, the floors are in need of replacement, and there is insufficient storage for fitness and athletic equipment. The 1938 gym is not ADA compliant. Still, with these limitations, they marginally serve the needs of the current fitness and health curricula and competitive athletic programs. However, as enrollment increases, these spaces will become increasingly inadequate.

For fitness/health classes and athletics, the facilities must accommodate both the breadth of courses and increasing participation. For competitive athletics, the facilities must provide adequate spaces for girls and boys team practices and for competitions that require indoor spaces (basketball, volleyball, wrestling, dance), and indoor track team practices. It should accommodate outdoor sports activities when the weather prohibits outdoor practice. In addition, the space needs should include the associated facilities such as locker rooms, fitness center, multipurpose spaces, storage and offices.

E. EXTRACURRICULARS

In addition to performing arts and athletics, the extracurricular program offers 32 clubs that offer a wide range of opportunities for students to contribute towards the greater community, be part of the school and/or explore an area of interest. The clubs range from the Key Club to the Academic Decathlon Club to the Poets Society.

F. COMPARABLES

The Wellesley High School currently offers a total educational program which measures up to comparable systems in almost all aspects. Program offerings are often a function of school system size. Schools with larger enrollments are able to offer more electives simply due to numbers: There are more students able to adequately fill courses. Smaller systems must make choices about which electives best meet the needs of the system. The WHS programs are neither above the current offerings of others, nor are they significantly short in any area.

High School 9th - 12th grades	Wellesley	Lincoln-Sudbury	Needham	Newton North	Wayland	Weston
Enrollment	1200	1611	1400	1911	903	722
Advanced Courses (AP courses)	Stats., Calculus, Comp. Sci., Biology, Chem., Physics., U.S. History, Psych., French, Spanish, Computers	Physics, Bio, Chem, Calculus, Stats, US History	Stats, Comp Sci, English, Calculus AB&BC, Bio., Physics, Chemistry, Art, Music Theory	English, Am. History, Am. Studies, Eur. History, Psych., Comp. Govt., Calculus, Comp. Sci., Stats., Bio., Chem., Physics, French, Spanish, Latin, Italian, Chinese, Art History	Am. History, Bio., Calc., Latin, Engl., French, Spanish, Chem, Physics, Music, Art, Psc, Econ, Comp Sci, Stats.	French, Spanish, World History, US History, European History, Comp. Sci., Stats., Chem, Physics, Bio., Music Theory
<i>Languages</i>	Chinese, French, Latin, German, Spanish	French, Latin, German, Spanish	Chinese, French Latin, Spanish,	Chinese, French, Latin, Russian, Spanish, Italian	French, Latin, Spanish	Chinese, French, Latin Spanish,
<i>Visual Arts</i>	17	21	19	18	10	14
<i>Technology/Engin.</i>	7	21	Minuteman	47	3/Minuteman	5/Minuteman
<i>Communications</i>	4	9	3	32	2	5
<i>Cons. Sci. /Bus</i>	15	1	Minuteman	39	4	8
<i>Drama</i>	7	6	1	5	4	3
<i>Chorus</i>	5	7	2	4	4	2
<i>Band</i>	4	7	3	4	4	3
<i>Orchestra</i>	1	3	1	2	4	3
<i>Other (Music Theory, etc.)</i>	6	7	7	6	3	2
<i>Clubs</i>	32	81	58	68	not available	51
<i>Athletics</i>	64 Teams	60 Teams	65 Teams	76 Teams	56 Teams	51 Teams

G. BUILDING TO PEAK ENROLLMENT

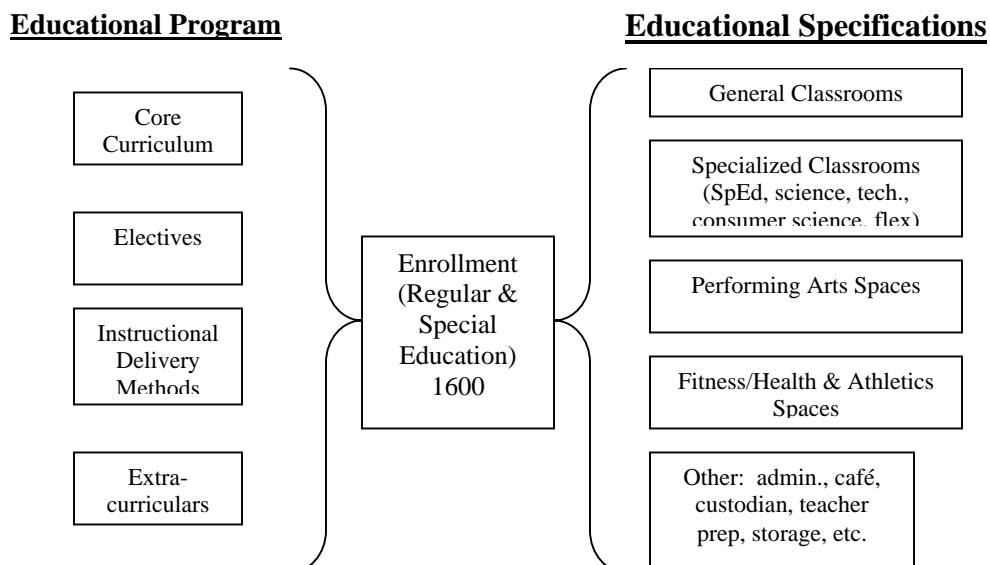
Enrollment is expected to peak at approximately 1600 students in FY18. The School Committee voted to increase the High School Project specification to accommodate the peak enrollment following a comparison of the alternatives: 1) building to the peak or 2) building to a smaller enrollment (such as 1300) and supporting the incremental enrollment with temporary modulars as needed.¹

Financially, with MSBA reimbursement, it is less expensive to build to peak since modulars are not eligible for MSBA funding. Without MSBA reimbursement, building to the peak is slightly greater than the alternative. However, building for less-than-peak enrollment would potentially have an adverse impact on the delivery of the educational program. In addition, there are significant challenges inherent in the construction, siting and permitting of modular classrooms. Lastly, enrollment fluctuations have typically demonstrated 20-year cycles. Therefore, it is highly probable that the High School facility will house levels near or at peak enrollment multiple times over the coming century. Temporary modulars, due to their limited lifespan and durability, would then be required again during the subsequent peaks. As enrollment declines, surplus classrooms can be made available for other uses or to accommodate other temporary or permanent space needs within town government. These “flex spaces” will be designed with this alternative potential in mind.

Enrollment cycle variability is a reality that Wellesley and other school systems must pro-actively manage. While the concept of building for a smaller enrollment than the projected peak has appeal in the short term, the enrollment cycle ultimately presents long-term challenges. The overall analysis, therefore indicates that building a high school to accommodate a 1600 enrollment is fiscally prudent.

H. EDUCATIONAL SPECIFICATIONS

The Educational Specifications are the space requirements (quantity and size) to support the Educational Program based on the expected enrollment. See the following page for the summary Educational Specification.



¹ Source: School Committee Position Paper, “Build for Peak or Less than Peak Enrollment.” Available online at www.wellesleyma.gov, go to *School Building Committee*, *Wellesley Public Schools - WHS Building Project Info*

Educational Specifications: Wellesley High School

A comprehensive analysis of the Educational Specifications can be found in the DeJong Report (April 2007), available online on the SBC webpage. Go to www.wellesleyma.gov, click on *School Building Committee* and go to *Download SBC Files*, DeJong Report.

A summary of the Educational Specification is provided in the following table:

PROGRAM –DEFINED SPACE	ED SPEC <i>net SF</i>
Science	16,500
Teacher Support	9,600
English	13,875
Social Studies	12,850
Mathematics	13,050
Classical & Modern Languages	11,150
Flex Classrooms	8,000
Technology/Engineering	8,400
Family & Consumer Science	6,300
Art	7,850
Performing Arts	11,550
Auditorium	11,900
Special Education	9,500
Fitness and Health	44,125
Library	9,450
Cafeteria/Student Union	16,895
Administration Suite	8,275
Guidance/Student Support	
Nurses Office	
Custodial	2,750
Other Spaces	240
Non-School Spaces	2,900
Total Net Space	225,610

Sources: DeJong Report, April 2007 and SMMA, March 2008